



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

CALCULUS.

185. Proposed by A. H. HOLMES, Brunswick, Maine.

Required the perpendicular height of a right cone, radius of base being unity, such that the maximum ellipse that can be cut from the cone shall equal the base of the cone in area.

186. Proposed by Editor EPSTEEN.

Evaluate $\int_0^{\infty} \frac{\sin my}{y} dy$, $\int_0^{\infty} \frac{\cos my}{y} dy$.

GROUP THEORY.

6. Proposed by L. E. DICKSON, Ph. D., The University of Chicago.

Show that the binary substitutions on ξ_1, η_1 , the binary substitutions on ξ_2, η_2 , and $(\xi_1 \xi_2)(\eta_1 \eta_2)$ generate a maximal subgroup of the quaternary abelian group.

MISCELLANEOUS.

146. Proposed by F. P. MATZ, Ph. D., Sc. D.

Given $\left\{ \begin{array}{l} a \cos \alpha + b \sin \alpha = c \\ a \cos \beta + b \sin \beta = c \end{array} \right\}$ to prove that

$$\sin(\alpha + \beta) = \frac{2ab}{a^2 + b^2}, \text{ and } \cot \alpha + \cot \beta = \frac{2ab}{c^2 - a^2}.$$

NOTES.

Mr. H. R. Willard has been appointed instructor in Mathematics in the University of Maine.

Mr. C. A. Holden has been appointed assistant professor of Mathematics in Dartmouth College.

Dr. C. Gunderson has been appointed instructor in Mathematics in the Michigan Agricultural College.

Mr. C. H. Sisam has been appointed instructor in Mathematics at the U. S. Naval Academy, Annapolis.

Mr. W. D. Cairns has been promoted to an associate professorship in Mathematics at Oberlin College.

Prof. T. F. Nichols, of Hamilton College, has been promoted to a full professorship of Applied Mathematics.